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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 734,684	12/13/2000	Yuuji Nakahara	Q61854	6519

"590 05/07/2003

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EXAMINER

NGUYEN, TRAN N

ART UNIT PAPER NUMBER

2834

DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/734,684

Applicant(s)

NAKAHARA ET AL.

Examiner

Tran N. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 20 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 2-6 and 9-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1, 7 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. **Claim 1** is rejected under 35 U.S.C. 103(a) as being unpatentable over Tawara et al (JP352036704A) in view of Wurth (US 4973873) and Johnson (US 3774062).

Tawara discloses a stator (figs. 2-6) comprising: an inner-ring core (1b) formed of a lamination of magnetic plate members, and having a plurality of teeth (2, 3) integrally provided on an inner side thereof, coils (4, 5) disposed in stator slots, and a magnetic outer-ring core (1a), which is a one-piece construction, fitted on an outer circumferential surface of the inner-ring core and holding the inner-ring core. Tawara substantially discloses the claimed invention, except for ***the winding is a wave winding coils disposed in slots***.

Wurth, however, teaches that wave winding coils disposed in slots of the stator (the fig). Wurth teaches that the wave windings are less costly to produce. Furthermore, the Examiner takes Official Notice that magnetic cores, i.e., stator or rotor cores, with wave windings are well known in the art.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the stator by embodying the wave windings, as taught by Wurth, for the stator winding. Doing so would produce the stator with low winding cost.

Regarding the limitations of the teeth are integrally provided on an inner side of the inner ring core, applicant is advised of the following court decisions regarding the claim language "integral":

That the expression "integral" in the present context has a somewhat broader connotation than appellant argues and *is not necessarily restricted to a one-piece article* is clear from

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the definition of that term as discussed in *Henderson v. Grable*, 52 CCPA 920, 339 F.2d 465, 144 USPQ 91, and *In re Larson*, 52 CCPA 930, 340 F.2d 965, 144 USPQ 347. *In re Kohno*, 157 USPQ 275, 277 n4. (CCPA 1968) (Emphasis added).

Rather it is our opinion that the circumstances here require that the *unambiguous term "integral" be given the broadest construction the language will reasonably bear without resort to the specification from which it originated*, 6 *In re Kelley*, 49 CCPA 1359, 1363, 305 F.2d 909, 913, 134 USPQ 397, 397; *Cusano v. Decepoli*, 41 CCPA 968, 970, 214 F.2d 134, 135, 102 USPQ 251, 25 1; *Wirkler v. Perkb'ns et al.*, 44 CCPA 1005, 245 F.2d 502, 114 USPQ 284, and cases cited therein, and we think such construction includes the Henderson parent application disclosure of a collar tightly screwed onto the outer pipe. *Henderson v. Grable*, 144 USPQ 91, 96 (CCPA 1964).

While the brake disc and clamp of Tuttle et al. comprise several parts, they are rigidly secured together as a single unit. *The constituent parts are so combined as to constitute a unitary whole. Webster's New International Dictionary (Second Edition) defines "integral" as "(2) Composed of constituent parts making a whole; composite; integrated."* We are inclined to agree with the board's construction of the term "integral" as used in claim 12. Then, too, we are inclined to agree with the position of the solicitor that the use of a one-piece construction instead of the structure disclosed in Tuttle et al. would be merely a matter of obvious engineering choice. *In re Fridolph*, 50 CCPA 745, 309 F.2d 509, 135 USPQ 319. *In re Larson*, 144 USPQ 347, 349 (CCPA 1965) (emphasis added).

Under these interpretations of "integral," Tawara does disclose, the stator core teeth are integrally provided to the inner core. ***This is broadly read as stator core teeth are integrally provided to the inner core.***

However, for argumentative point of view, one may point out that the teeth and the core are not materially integrally formed.

Johnson, however, teaches a stator having the core and the teeth being materially integrally formed. The Examiner takes Official Notice that stator cores having laminated plates, wherein the core is provided with integrally materially formed teeth, are so well known in the art (see cited ref for supporting evidence of this statement).

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the stator by configuring the stator core having the core and the teeth being materially integrally formed, as taught by Johnson, because this configuration reducing manufacturing steps for fabricating the stator core and this type of stator cores is well known in the art.

2. **Claims 7-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Tawara, Wurth and Johnson, as applied in the rejection against the base claim, and further in view of level of ordinary skills of a worker in the art.

The combination of Tawara, Wurth and Johnson refs discloses the claimed invention except for the following added limitations: 9a) thickness of the outer-ring core in radial direction is larger than that of a yoke portion in the inner-ring core, as recited in claim 7; (b) thickness of yoke portion in the inner-ring core in radial direction is larger than that of outer-ring core, as recited in claim 8.

Those skilled in the art would understand that the significant disclosure in the Tawara ref is to provide an outer-ring core to mechanically supporting the inner-ring core and to efficiently transmitting magnetic flux, as the iron outer-ring core being part of the magnetic circuit therein.

Thus it would have been obvious to an artisan to apply this important teaching, along with obvious engineering design choices or required parameters, to configure the radial thickness of the outer-ring core to be larger than that of the inner-ring core's yoke portion in order to ensure structural integrity of the stator by enhancing the mechanical strength of the outer-ring core's support.

On the other hand, to configure the radial thickness of the inner-ring core's yoke portion to be larger than that of the outer-ring core would enhance the efficiently magnetic interacting between the inner-ring cores with coils therein and the motor's rotor. Either way is a matter of obvious engineering design of changing thickness size.

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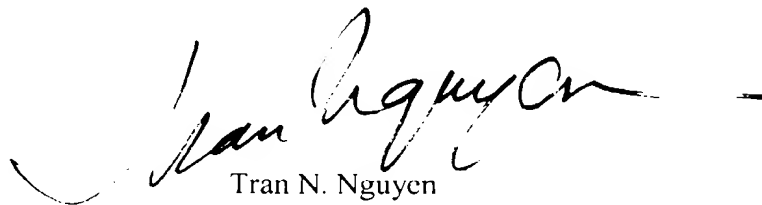
Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the stator by configuring the thickness of the outer-ring core to be larger than that of the inner-ring core's yoke portion or by configuring the thickness of the inner-ring core's yoke portion to be larger than that of the outer-ring core, as in the claims. Doing so would enable sufficient strength of either mechanical structure of the stator's outer-ring core or magnetic circuit of the stator's inner-ring core. This changing size of the disclosed stator components. It has been held that changing size and/or shape of the disclosed component requires only routine skills in the art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N. Nguyen whose telephone number is (703) 308-1639. The examiner can normally be reached on M-F 7:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703)-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3431 for regular communications and (703)-305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-1782.

A handwritten signature in black ink, appearing to read "Tran N. Nguyen", is written over a horizontal line. The signature is fluid and cursive.

Tran N. Nguyen

Primary Examiner

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